

CLAIMS

What is claimed is

1 1. A surgical fastener, comprising:

2 a proximal end and a distal end

3 a first member comprising, a first interior face, a first exterior face, and a
4 first engagement element;

5 a second member comprising a second interior face, a second exterior
6 face, and a second engagement element, said second engagement element
7 complementary with said first engagement element, wherein said first engagement
8 element and said second engagement element couple to position said first interior
9 face of said first member and said second interior face of said second member in
10 proximity; and

11 an anchor, said anchor anchoring said surgical fastener at an anatomical
12 site.

1 2. The surgical fastener of claim 1, wherein said anchor is disposed on at least one of
2 said first or said second members between said proximal end and said distal end of said
3 surgical fastener.

1 3. The surgical fastener of claim 1, wherein said anchor is integral to one of said
2 members.

1 4. The surgical fastener of claim 1, wherein said anchor is attached to said first
2 interior face of said first member, and said second member comprises an aperture defined
3 by said second member wherein said anchor passes through said aperture when said first
4 interior face of said first member is in proximity with said second interior face of said
5 second member.

1 5. The surgical fastener of claim 1, wherein said first engagement element comprises
2 said anchor.

1 6. The surgical fastener of claim 1, further comprising a flexible tether wherein said
2 anchor is attached to said first member or said second member by said flexible tether.

1 7. The surgical fastener of claim 1, wherein said anchor is attached to said exterior
2 face of said first member or said second member.

1 8. The surgical fastener of claim 1, wherein said anchor comprises a tapered head
2 connected to a shank.

1 9. The surgical fastener of claim 8, wherein said shank is attached to said first
2 member or said second member.

1 10. The surgical fastener of claim 1,
2 wherein said first member defines a first aperture extending through said
3 first member, and said second member defines a second aperture aligned with said
4 first aperture and extending through said second member;

5 wherein said first aperture and said second aperture define an opening;

6 wherein said anchor passes through said opening.

1 11. The surgical fastener of claim 10, wherein said anchor includes a tapered head, a
2 shank, and a base.

1 12. The surgical fastener of claim 11, wherein solely said tapered head and said shank
2 of said anchor pass through said opening and said base is adjacent said exterior
3 face of said first member or said second member.

1 13. The surgical fastener of claim 11, wherein said base further comprises an
2 implantation device attachment site.

1 14. The surgical fastener of claim 1, wherein said anchor is adapted to secure to an
2 anatomical structure selected from the group consisting of bone, cartilage, tissue, muscle,
3 and ligament.

1 15. The surgical fastener of claim 1, further comprising a hinge section wherein said
2 hinge section joins said first member and said second member.

1 16. The surgical fastener of claim 15, further comprising a flexible tether wherein
2 said anchor is attached to said hinge by said flexible tether.

1 17. The surgical fastener of claim 1, wherein said surgical fastener comprises a
2 plurality of first engagement elements and a plurality of second engagement elements.

1 18. The surgical fastener of claim 1,

2 wherein said first engagement element comprises one or more pins
3 positioned on said interior face of said first member; and

4 said second engagement element is configured to couple with said pins
5 positioned on said first member.

1 19. The surgical fastener of claim 18, wherein said second engagement element
2 comprises said second member defining an aperture.

1 20. The surgical fastener of claim 18, wherein said second engagement element
2 comprises said second member defining a blind hole.

1 21. The surgical fastener of claim 1 wherein said first member further comprises a
2 second engagement element and said second member further comprises a complementary
3 first engagement element.

1 22. The surgical fastener of claim 1, wherein said first engagement element comprises
2 one or more ridges and said second engagement element comprises one or more
3 complementary grooves.

1 23. The surgical fastener of claim 1,

2 wherein said first engagement element comprises a tongue and wherein
3 said second engagement element comprises a notch, said notch positioned and
4 shaped to couple with said tongue.

1 24. The surgical fastener of claim 23, wherein said first member further comprises
2 another first engagement element and said second member further comprises another
3 second engagement element.

1 25. The surgical fastener of claim 24, wherein said other first engagement element
2 comprises a pin and said other second engagement element comprises a second member
3 defining an aperture.

1 26. The surgical fastener of claim 24, wherein said other first engagement element
2 comprises a pin and said other second engagement element comprises said second
3 member defining a blind hole.

1 27. The surgical fastener of claim 24, wherein said second first engagement element
2 comprises one or more ridges and said second second engagement element comprises one
3 or more complementary grooves.

1 28. The surgical fastener of claim 23,

2 wherein said tongue is positioned at said distal end of said first member
3 and said notch is positioned at said distal end of said second member.

1 29. The surgical fastener of claim 28, further comprising a hinge section wherein said
2 hinge section joins said proximal end of said first member and said proximal end of said
3 second member.

1 30. The surgical fastener of claim 28, wherein said first member further comprises a
2 second tongue positioned at said proximal end of said first member and said second
3 member further comprises a second notch positioned at said proximal end of said second
4 member.

1 31. The surgical fastener of claim 28, wherein said first member further comprises a
2 notch positioned at said proximal end of said first member and said second member
3 further comprises a tongue positioned at said proximal end of said second member.

1 32. The surgical fastener of claim 1,

2 wherein said first member a first engagement element comprises a first
3 aperture extending through said first member;

4 wherein said second member second engagement element comprises a
5 second aperture extending through said second member, wherein said first
6 aperture and said second aperture define an opening; and

7 wherein said anchor is configured to pass through said opening coupling
8 said first member and said second member in the closed position.

1 33. The surgical fastener of claim 32 wherein said anchor comprises a base, a shank,
2 and a tapered head, wherein said surgical fastener is anchored to an anatomical structure
3 by said anchor and is positioned between said anatomical structure to which said surgical
4 fastener is secured and said base of said anchor.

1 34. A surgical fastener of claim 1 further comprising a surgical material, wherein said
2 first member and said second member secure said surgical material in said surgical
3 fastener.

1 35. The surgical fastener system of claim 34, wherein said surgical material is
2 selected from the group consisting of slings, sutures, meshes, yarns, tapes, threads, grafts,
3 fabrics, and sheaths.

1 36. A surgical fastener, comprising:

2 a first member comprising a proximal end and a distal end, at least a first
3 interior face and a first exterior face extending between said proximal end and
4 said distal end, and a first engagement means;

5 a second member comprising a proximal end and a distal end, at least a
6 second interior face and a second exterior face extending between said proximal
7 end and said distal end, and a second engagement means, wherein said first
8 engagement means and said second engagement means couple to fix said first
9 interior face and said second interior face in proximity; and

10 an anchoring means to secure said first member and said second member to an
11 anatomical structure.

1 37. A method for securing a surgical material to an anatomical structure comprising
2 the steps of:

3 (a) providing a surgical fastener, said surgical fastener comprising
4 a proximal end and a distal end;

5 a first member comprising, a first interior face, a first exterior face, and a
6 first engagement element;

7 a second member comprising a second interior face, a second exterior
8 face, and a second engagement element, said second engagement element
9 complementary with said first engagement element, wherein said first engagement
10 element and said second engagement element couple to position said first interior
11 face of said first member and said second interior face of said second member in
12 proximity; and

13 an anchor;

14 (b) securing said surgical fastener to a surgical material;

15 (c) releasably attaching a surgical implantation device to said surgical fastener;

16 (d) introducing said surgical fastener to an implantation site in a patient's body;

17 (e) anchoring said anchor into said anatomical structure.